

SITUATION REPORT NO. 4
INCIDENT NO. 2003-122
DATE: December 12, 2003 Time: 3:30 p.m.

TO: Governor John Hoeven
State Capitol
Bismarck, ND 58505

1. NATURE OF DISASTER: Serious Water Distribution Problems – Standing Rock Sioux Indian Reservation officials report that sediment, resulting from low Oahe Reservoir levels, is plugging the Fort Yates water treatment plant's intake system, impacting water users in Sioux County and the reservation, including the communities of Fort Yates, Porcupine, Solen and Cannonball.
2. DEATHS AND INJURIES: No deaths or injuries have been reported.
3. DAMAGES: No change from previous reports.
4. RESOURCES:
LOCAL: No change from previous reports.
STATE: No change from previous reports.
FEDERAL: No change from previous reports.
5. VOLUNTEER ACTION: No change from previous reports.
6. MAJOR ACTIONS: Workers, challenged by ice flows and strong currents, are continuing their efforts to construct a reliable water supply intake system for the Fort Yates water treatment. On Thursday, December 11, U.S. Bureau of Reclamation (BOR) officials reported workers are also evaluating whether to wait until spring to conduct repair work on the existing intake structure once submersible pumps and pipelines are in place and operating reliably. Following is a summary of recent construction activities:
 - The Garrison Diversion Conservancy District has mobilized equipment and manpower to construct an access road and put pumps and water lines in place for a temporary water supply. For the past three weeks, agency employees have been on-site 24 hours a day since receiving a call for assistance from the BOR. Workers have created an earthen berm for placement of an overland pipeline system, lengthened and stabilized the berm with riprap so that a crane would have a secure platform during barge placement, and assisted with planning repairs to the intake structure.
 - Water is being supplied to the treatment plant using the main diesel-powered pump and overland pipe system.

- On Friday, December 5, a second diesel-powered pump has been positioned upstream of where intake work will be taking place to avoid problems associated with stirred up sediment during work on the intake structure. Poly pipe has been placed for this pump, which will tap into the current pipeline to supply water to the treatment plant when work begins on the intake structure. The Conservancy District has been providing pipelines for the various alternate pumps and funding for associated cost, supply and installation of the pipelines.
- Excavation near the banks of the Missouri River was taking place to create sumps for two permanent submersible pumps and trench work to place both water supply pipelines below the frost line. This effort was scheduled for completion on Thursday, December 11.
- A submersible pump has been delivered to the site and will be installed as a permanent secondary system. Trench digging activities to bury the submersible pump pipeline below the frost line have begun. Additionally, Initial river channel surveys were conducted to identify deep-water areas for placement of the submersible pump. Plans call for installing the pump by Friday, December 12.
- Electrical cable run for wiring the submersible pump was found to be unsuitable for underwater submersion at the pump connection and was not heavy enough for the required application. Proper cable was ordered and a generator was placed on site to provide electrical power for pumping operations until heavier cable is in place. BOR officials stated that proper electrical cable is expected Thursday, December 18, but the cable currently in place can be used if required in an emergency.
- On the morning of Friday, December 5, the suction pipe, running between the Missouri River and the main diesel-powered pump, collapsed. A secondary pump was activated but had to be shut down due to ice blockage of the intake screen. The Conservancy District delivered replacement pipes, and both systems were operational by afternoon after replacing the suction pipe on the main system and replacing the type of screen used on the secondary system. The treatment plant was able to continue distributing water throughout the system during the outage, having enough treated water in storage to continue distribution for 24 hours.
- On Sunday, November 30, Industrial Builders of Minot N.D. used a crane to place a tugboat into the water and a five-section barge into the water near the intake structure. Workers on the tugboat gathered information regarding water depths in areas surrounding the intake structure. Ice flows on the river had become problematic with reports of the tugboat and barge having frozen in place, requiring the use of a bulldozer to pull them free.
- Diving operations have been suspended due to ice flows and strong current creating unsafe conditions on the Missouri River.

In response to the water distribution crisis, residents were directed to boil their water until Tuesday, December 2, when local, state and federal environmental officials determined the water supply was safe. Agencies supporting this effort

included the N.D. Department of Health, the Environmental Protection Agency (EPA), the N.D. National Guard and the N.D. Department of Transportation. Following is a summary of their activities:

- On Thursday, November 27, water was pumped throughout the distribution network to begin flushing the system of bacteria and stagnant water. The N.D. Department of Health enforced an EPA temporary boil order.
- From Friday, November 28 through Wednesday, December 3, water storage tanks throughout the water district were up to full storage capacity with chlorinated water. There was a problem with ice formation in the current overland pipe system during the weekend of November 29-30, caused by low water flow through the pipe system. The problem was corrected by increasing flows and returning excess water back into the Missouri River.
- EPA officials lifted the boil order for communities receiving water from the Fort Yates water treatment plant on Tuesday, December 2, based on results returned on water sample testing conducted by the N.D. Department of Health during the period of Saturday, November 29 to Monday, December 1.
- The N.D. National Guard provided five 400-gallon water buffaloes and personnel to distribute drinking water to the communities of Cannonball, Fort Yates, Solen and Porcupine during a nine-day period, November 25 through December 3. Two National Guard water buffaloes were sent to Solen High School to provide drinking water to students and faculty from Monday, December 1 to Wednesday, December 3. In total, the National Guard transported 22 loads of water providing the residents of Sioux County with 8,800 gallons of potable water.
- N.D. Department of Transportation (DOT) tanker trucks supplying non-potable water to the affected communities returned to Bismarck on Friday, November 28, after reports indicated water was being supplied throughout the water distribution system.
- The Fort Yates hospital was operating on an emergency triage/outpatient status only until the water system was determined to be safe for consumption on Wednesday, December 3. The hospital has resumed normal service to the community with the exception of the dialysis unit.

7. ASSISTANCE NEEDED: As indicated.

8. OUTSIDE HELP ON SCENE: No change from previous reports.

9. OTHER INFORMATION: The N.D. Division of Emergency Management's Situation Reports are posted on the Division's Internet home page. The address is <http://www.state.nd.us/dem>.

Douglas C. Friez, State Director